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11 **UNITED STATES DISTRICT COURT**
12 **NORTHERN DISTRICT OF CALIFORNIA**
13 **SAN FRANCISCO DIVISION**

14 MAXIMILIAN KLEIN, et al.,

Consolidated Case No. 3:20-cv-08570-JD

15 Plaintiffs,

**CONSUMER PLAINTIFFS' OPPOSITION
TO DEFENDANT FACEBOOK'S
MOTION TO EXCLUDE TESTIMONY
AND OPINIONS OF JOSEPH FARRELL,
D.PHIL.**

16 vs.

The Hon. James Donato

17 META PLATFORMS, INC.,

Hearing Date: July 24, 2025 at 10:00 a.m.

18 Defendant.

PUBLIC REDACTED VERSION

19 This Document Relates To: All Consumer
Actions

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Case No. 3:20-cv-08570-JD

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1 **I. INTRODUCTION**

2 Facebook begins its Motion by labeling “contrived,” Mot. 1, the relevant market Dr. Farrell
 3 determined—a personal social networking services market which includes general purpose social
 4 networks like Facebook, Instagram, Snapchat, MeWe, and Google+. Facebook’s accusation flies in
 5 the face of its self-imposed moniker “*the* social network” and its repeated statements that it competes
 6 with other apps and websites that Facebook also calls social networks. Facebook then asserts that Dr.
 7 Farrell—the former chief economist at the Federal Trade Commission and DOJ Antitrust Division
 8 and now an economics professor at Berkeley—is “particularly poorly situated” to assess the relevant
 9 market in this case. *Id.*

10 Beyond Facebook’s motion’s bombast and mischaracterization of Dr. Farrell’s report, the
 11 motion improperly asks the Court to rule on the factual inputs Dr. Farrell uses in his methodology,
 12 not the methodologies themselves, contrary to Ninth Circuit precedent. *See Elosu v. Middlefork Ranch*
 13 *Inc.*, 26 F.4th 1017, 1024 (9th Cir. 2022) (“The court is a gatekeeper, not a fact finder.”). Dr. Farrell’s
 14 methodology to determine the relevant market is well-accepted in the field of market definition and
 15 by courts. He identified a candidate market by applying economic principles for market definition to
 16 the record evidence, finding particularly relevant statements by Facebook explaining which products
 17 it sees as especially worrying competitors for its own products Facebook and Instagram. He then used
 18 quantitative tools—two related approaches to implementing the hypothetical monopolist test called
 19 critical loss analysis and upward pricing pressure—to assess whether the candidate market passed the
 20 hypothetical monopolist test (*i.e.*, whether a hypothetical monopolist of the candidate market would
 21 find it profitable to significantly worsen the terms on which the products in the candidate market are
 22 available). When it did, he calculated Facebook’s share of the personal social networking services
 23 (PSNS) market. Facebook does not assert that this framework generally, or critical loss analysis and
 24 upward pricing pressure specifically, are unreliable methodologies for assessing a relevant market.
 25 Instead, Facebook seeks exclusion because it disagrees with Dr. Farrell’s inputs. None of the grounds
 26 on which Facebook seeks to exclude Dr. Farrell’s opinions has merit.

27 *First*, contrary to Facebook’s claim, Mot. 6, Dr. Farrell’s qualitative analysis uses an
 28 economic methodology. Dr. Farrell clearly signposts this with the headings in his report: in Section

1 III, he discusses “Economic principles for relevant market definition,” and then in Section IV he does
 2 an “Application of market definition principles to Facebook” by analyzing the record evidence. A
 3 qualitative analysis is an acceptable method to determine the relevant market. *Teradata Corp. v. SAP*
 4 *SE*, 124 F.4th 555, 566, 571 (9th Cir. 2024); *Fed. Trade Comm'n v. Meta Platforms Inc.*, 654 F. Supp.
 5 3d 892, 912, 920 (N.D. Cal. 2023); *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962). And
 6 the type of evidence Dr. Farrell found particularly pertinent—statements and actions by Facebook
 7 explaining which products it sees as competing with its own products—“are highly probative” to
 8 market definition. *Klein v. Facebook, Inc.*, 580 F. Supp. 3d 743, 773 (N.D. Cal. 2022); *accord FTC*
 9 *v. Meta*, 654 F. Supp. 3d at 913. Moreover, Dr. Farrell’s qualitative analysis was part of a market
 10 definition assessment that included quantitative analysis too, which also found the PSNS market was
 11 proper. Defining the relevant market “based on a qualitative analysis of [defendant’s] business
 12 documents and other evidence” then “corroborat[ing]” the results using a critical loss analysis, as Dr.
 13 Farrell did, is a reliable methodology. *Teradata*, 124 F.4th at 566, 568-70.

14 **Second**, the quantitative analysis Dr. Farrell used—critical loss analysis and a related tool
 15 called upward pricing pressure—has long been found by economists and courts to be a reliable
 16 method to assess a relevant market, which Facebook does not dispute. *See* Ex. 11, Daniel P. O’Brien
 17 et al., *A Critical Analysis of Critical Loss Analysis*, 71 Antitrust L.J. 161, 161 (2003) (“Critical loss
 18 analysis is a widely-used technique in antitrust practice.”); *Dial Corp. v. News Corp.*, 165 F. Supp.
 19 3d 25, 41 (S.D.N.Y. 2016) (denying motion to exclude “a critical loss analysis, developed in Joseph
 20 Farrell and Carl Shapiro, *Improving Critical Loss Analysis*,” used to define the relevant market).
 21 Because it cannot attack his methodology, Facebook incorrectly contends Dr. Farrell misapplied it by
 22 using imperfect data inputs. Mot. 10-12. He did not, but more importantly for purposes of a motion
 23 to exclude, Facebook’s disagreement with his use of a well-accepted methodology at most goes to
 24 weight, not admissibility. *See Kennedy v. Collagen Corp.*, 161 F.3d 1226, 1231 (9th Cir. 1998)
 25 (“faults in [expert’s] use of [a] methodology...go to the weight, not the admissibility, of his
 26 testimony”).

27 **Finally**, Dr. Farrell’s use of estimates to calculate market share where Facebook did not
 28 produce perfect data does not render his opinions unreliable, as Facebook asserts. Mot. 12. Facebook

1 does not contend the calculations themselves—which are simple math—are an improper method to
 2 assess market shares. It does not claim Dr. Farrell’s data, [REDACTED]
 3 [REDACTED], is unreliable to measure market share. Nor does it contend Dr. Farrell’s
 4 estimates affect the result that Facebook has monopoly power. Facebook contends only that when Dr.
 5 Farrell reduced his calculation of its market share from [REDACTED], he
 6 should have used different estimates, even while Facebook acknowledges the ones he used are based
 7 in Facebook’s own documents. Mot. 13-15. Dr. Farrell’s estimates were reasonable; regardless,
 8 Facebook’s criticisms are not grounds for exclusion. *Elosu*, 26 F.4th at 1026 (“Rule 702 does not
 9 license a court to engage in freeform factfinding, to select between competing versions of the
 10 evidence, or to determine the veracity of the expert’s conclusions at the admissibility stage.”).

11 **II. BACKGROUND**

12 Dr. Farrell is an economics professor of the Graduate School at the University of California,
 13 Berkeley. Ex. 1 ¶ 1. He received his doctorate in economics from Oxford University. *Id.* He previously
 14 served as Director of the Bureau of Economics at the FTC and was responsible for economic analysis
 15 relating to its antitrust and consumer protection portfolios. *Id.* ¶ 2. He also contributed to drafting the
 16 Horizontal Merger Guidelines. *Id.* He previously served as chief economist at the DOJ Antitrust
 17 Division and as the Chief Economist for the Federal Communications Commission. *Id.* ¶ 3. He has
 18 published extensively on the economics of competition, market definition, industrial organization,
 19 and innovation. *Id.* ¶ 5. He has served as an expert witness in many antitrust matters and been qualified
 20 as an expert in relevant market definition. *Id.* ¶ 7, App. A.

21 In this case, Dr. Farrell identified a relevant product and geographic market and then
 22 calculated Facebook’s and other participants’ market shares. *Id.* §§ IV.B., V, VI. He identified a
 23 product market by using qualitative evidence along with principles of antitrust market definition to
 24 first establish a candidate market and then apply a quantitative hypothetical monopolist test to assess
 25 whether the candidate market was sufficiently broad. *Id.* ¶¶ 17-19. He also analyzed whether and how
 26 Facebook’s deceptive conduct could have resulted in competitive harm. *Id.* § VII.

27 First, Dr. Farrell identified a relevant candidate market to be the PSNS market by applying
 28 economic principles of market definition to the record evidence. *Id.* ¶ 124, §§ III, IV.B.1-2. He

1 considered fundamental economic antitrust principles such as identifying and including reasonably
 2 close substitutes from the customers' perspective and assessing whether competition makes a
 3 difference to outcomes. *Id.* ¶¶ 83, 85-86. He also considered how these fundamental principles apply
 4 or are modified in idiosyncratic markets, such as those with "zero prices," and markets in which
 5 revenue is earned via advertisers, and markets with network effects. *Id.* ¶¶ 83, 105-17. And he
 6 discussed how to extend fundamental principles of antitrust market definition to the situation alleged
 7 in this case—a pre-existing exercise of market power or monopolization. *Id.* ¶¶ 83, 118-23. He then
 8 applied these principles to relevant evidence, focusing on [REDACTED]
 9 [REDACTED] (*id.* ¶¶ 144-55); Facebook's [REDACTED]
 10 [REDACTED] (*id.* ¶¶ 156-64); Facebook's [REDACTED]
 11 [REDACTED] (*id.* ¶¶ 165-75); Facebook's [REDACTED]
 12 [REDACTED] (*id.* ¶¶ 176-81); and [REDACTED]
 13 [REDACTED] (*id.* ¶¶ 182-89).

14 Next, Dr. Farrell assessed whether the candidate PSNS market passed the hypothetical
 15 monopolist test using the standard quantitative tool called critical loss analysis (CLA) and a related
 16 analysis known as upward pricing pressure (UPP). *Id.* ¶¶ 190-93. CLA "implements the hypothetical
 17 monopolist test in a candidate market by asking whether a hypothetical monopolist would profitably
 18 impose a SSNIP or impose a comparable worsening of terms (SSNIPT)." *Id.* ¶ 194. For a CLA, "one
 19 first computes the critical loss, which is the amount of loss in volume that would just make a SSNIP
 20 imposed by the hypothetical monopolist unprofitable." *Id.* ¶ 195. "If the predicted (also called actual)
 21 loss due to the SSNIP would be lower than the critical loss, then the SSNIP would be profitable and
 22 the candidate market passes the hypothetical monopolist test for a relevant antitrust market." *Id.* CLA
 23 can be properly applied to PSNS because, among other things, users in fact do pay a price to use
 24 Facebook insofar as, in exchange for access to the platform, users give value to Facebook in the form
 25 of their data, which Facebook monetizes. *Id.* ¶ 199. [REDACTED]
 26 [REDACTED]

27 *Id.* ¶ 200. Facebook (and other PSNS providers) face the same tradeoffs between profit margin and
 28 volume as do "textbook" industry participants: if they increase price, they lose volume and related

1 revenue from customers switching away because [REDACTED]
 2 [REDACTED]. *Id.* ¶ 201; Ex. 5 (Farrell Dep.) 113:21-114:17 (“[REDACTED]
 3 [REDACTED]”). Dr. Farrell then input numbers from Facebook’s internal data, public financial
 4 filings, and internal studies into the CLA equations. *Id.* ¶¶ 210, 214. UPP similarly implements the
 5 hypothetical monopolist test by looking at diversion rates, substitute products, and changes in price
 6 or quality. *Id.* ¶¶ 95-97. Both analyses indicated a PSNS market passes the hypothetical monopolist
 7 test, and as a result, PSNS is a relevant antitrust market. *Id.* ¶ 19, 219. Dr. Farrell then determined the
 8 relevant geographic market is the United States, *id.* ¶¶ 222-25, which Facebook’s experts agree on.

9 Finally, Dr. Farrell computed market share during the class period for the five companies in
 10 the PSNS market using [REDACTED], the thing Facebook considers social apps to
 11 compete for. *Id.* ¶ 253. To do so, he used [REDACTED] for each of the five apps in the market,
 12 produced by the apps providers. *Id.* ¶¶ 254-55, Figs. 11-12. He excluded [REDACTED] on Facebook,
 13 Instagram, and Snapchat [REDACTED]
 14 [REDACTED]—based on internal Facebook and Snapchat estimates. *Id.* ¶¶ 256-
 15 57. The data showed Meta was about [REDACTED] of the PSNS market; Snapchat was a distant second at
 16 [REDACTED]; and Google+ and MeWe had less than [REDACTED] each during the relevant period. *Id.* ¶ 255.

17 Additionally, Dr. Farrell analyzed how Facebook’s deceptive conduct can cause antitrust harm
 18 by distorting consumer choice, weakening competitors, and undermining the competitive process. *Id.*
 19 ¶ 259; *see generally* §VII. Facebook has not moved to exclude these opinions. Mot. 15.

20 **III. DR. FARRELL’S MARKET DEFINITION AND COMPETITION OPINIONS ARE
 21 RELIABLE**

22 **A. Dr. Farrell Reliably Identified a Candidate Relevant Product Market By
 23 Applying Fundamental Principles of Antitrust Market Definition**

24 Facebook’s assertion that Dr. Farrell’s “qualitative analysis” should be excluded because it
 25 supposedly “does not purport to apply an economic methodology” (Mot. 6), fails because it relies on
 26 misconstruing Dr. Farrell’s report and misstating the law on relevant antitrust market definition.
 27 Consistent with Supreme Court and Ninth Circuit precedent, Dr. Farrell identified a relevant
 28 candidate market to be the PSNS market by applying fundamental economic principles of market
 definition to case evidence, including to Facebook statements regarding which products it sees as

1 competitors to Facebook. He then confirmed the PSNS market passed the hypothetical monopolist
 2 test using well-accepted quantitative tools (two related approaches to the test called CLA and UPP).

3 “[T]here is no requirement to use any specific methodology in defining the relevant market.”
 4 *Optronic Techs., Inc. v. Ningbo Sunny Elec. Co.*, 20 F.4th 466, 482 (9th Cir. 2021). The Ninth Circuit
 5 found “without merit” the contention that expert testimony did not establish the relevant market
 6 for a Section 2 Sherman Act claim because it did not “analyze the cross-elasticity of demand between
 7 the product and substitutes, conduct a SSNIP analysis, . . . or evaluate substitutes.” *Id.* Generally,
 8 qualitative analysis is an acceptable method to determine the relevant market. *Teradata Corp.*, 124
 9 F.4th at 571; *FTC v. Meta.*, 654 F. Supp. 3d at 912, 920 ; *Brown Shoe Co.*, 370 U.S. at 325 (boundaries
 10 of a market may be determined by examining practical indicia); *Lucas Auto. Eng., Inc. v.
 11 Bridgestone/Firestone, Inc.*, 275 F.3d 762, 767–68 (9th Cir. 2001) (qualitative evidence relating to
 12 certain *Brown Shoe* criteria sufficient to define a relevant market). More specifically, the Ninth Circuit
 13 has found that defining the relevant market “based on a qualitative analysis of [defendant’s] business
 14 documents and other evidence” then “corroborat[ing]” the results using a critical loss analysis, as Dr.
 15 Farrell did, is a reliable methodology. *Teradata*, 124 F.4th at 566, 568-70; *see also Fed. Trade
 16 Comm’n v. IQVIA Holdings Inc.*, 710 F. Supp. 3d 329, 370, 372 (S.D.N.Y. Jan. 8, 2024) (finding that
 17 evaluating qualitative evidence to identify a product market, and then using the hypothetical
 18 monopolist test to confirm that market is a relevant antitrust market was a reliable methodology).
 19 Additionally, “statements by companies explaining which products they see as competitors for their
 20 own products are highly probative” to relevant market definition. *Klein*, 580 F. Supp. 3d at 773;
 21 *accord FTC v. Meta.*, 654 F. Supp. 3d at 913 (“Industry companies’ internal communications showing
 22 frequent distinctions between various categories of applications is strong support of a distinct
 23 submarket.”) (internal citation omitted).

24 Facebook’s contention that Dr. Farrell’s “qualitative analysis does not purport to apply an
 25 economic methodology, [or] specialized knowledge” (Mot. 6) is a baseless characterization
 26 contradicted by his report. In Section III of his report, Dr. Farrell discusses “[e]conomic principles
 27 for relevant market definition” for over 15 pages, starting with “plain-vanilla” markets, then
 28 commenting on “idiosyncratic” markets with “zero prices” and “network effects” of the type here,

1 and finally discussing how these principles extend to a monopolized market, what Consumers allege
 2 exists. Ex. 1 ¶¶ 83-84. Then, in Section IV, entitled “[a]pplication of market definition principles to
 3 Facebook,” Dr. Farrell applies those economics principles to evidence in the case, concluding that the
 4 relevant market is the PSNS market. *Id.* ¶ 124.

5 Facebook cannot and does not contend that any of the economic principles Dr. Farrell states
 6 in his report are not well-accepted methods for market definition. Nor does Facebook cite any
 7 controlling caselaw holding that a qualitative analysis that applies economic principles for market
 8 definition to case evidence is unreliable. It is. *See Teradata*, 124 F.4th at 566, 568-70; *IQVIA*, 710 F.
 9 Supp. 3d at 369-71, 373. In *Teradata*, plaintiff’s expert defined the relevant markets “primarily based
 10 on a qualitative analysis of [defendant’s] documents and other evidence” then “corroborated his
 11 results using various quantitative methodologies,” including a critical loss analysis. *Teradata*, 124
 12 F.4th at 566, 568-70. The Ninth Circuit found these methodologies “reasonable” to define the relevant
 13 market and that the district court abused its discretion in excluding the testimony. In *IQVIA*, plaintiffs’
 14 expert defined the relevant market “[b]ased on the qualitative evidence he evaluated.” *IQVIA*, 710 F.
 15 Supp. 3d at 370. He then relied on CLA and another quantitative tool to apply the hypothetical
 16 monopolist test to confirm the market he had identified using qualitative evidence. *Id.* The court
 17 concluded his testimony supported the relevant product market. *Id.* at 372. Dr. Farrell did a qualitative
 18 analysis in the exact same framework to define a relevant market here. *See Background, supra*, 3-4.

19 Facebook’s claim that Dr. Farrell’s evidence related to Google+ and Facebook’s API and Ad
 20 restrictions is “cherry picked” and vaguely described (Mot. 6), is not borne out in Dr. Farrell’s report,
 21 and in any event is a matter for cross-examination, not a basis for exclusion. Dr. Farrell explains why
 22 the entry of Google+ supports a market limited to PSNS: “[REDACTED]
 23 [REDACTED]
 24 [REDACTED]

25 [REDACTED]” Ex. 1 ¶ 141. Facebook does
 26 not contest that Facebook described Google+ as [REDACTED]
 27 (*id.* ¶ 144), that Facebook saw Google+ as [REDACTED]
 28 [REDACTED] (*id.* ¶ 148), and

1 that Facebook [REDACTED] (*id.* ¶¶ 145-46). Nor does
 2 Facebook contest that its unique reaction to Google+, a social network with a use and function that
 3 closely matched Facebook, [REDACTED] than its reaction to other social media companies like
 4 YouTube, Twitter, LinkedIn, and Tumblr, all of which had more users than Google+, but different
 5 uses and functions. *Id.* ¶ 150. Moreover, the type of evidence Dr. Farrell relies on—statements by
 6 Facebook and its executives—is “highly probative” to relevant market definition. *See Klein*, 580 F.
 7 Supp. 3d at 773; *FTC v. Meta*, 654 F. Supp. 3d. at 913. Finally, contrary to Facebook’s claim, Dr.
 8 Farrell explains why he excluded others like TikTok and YouTube (based on significant differences
 9 in use cases) from the PSNS market. Ex. 1 ¶¶ 156-164; § II.

10 Dr. Farrell similarly explains why it is appropriate to exclude from the PSNS market
 11 competitors’ apps that Facebook categorized as “messaging” or “social network” apps and [REDACTED]

12 [REDACTED]. Ex. 1 ¶¶ 173, 185 (“[REDACTED]
 13 [REDACTED]
 14 [REDACTED]”). Dr.
 15 Farrell then did not include messaging apps in the relevant market because [REDACTED]
 16 [REDACTED]
 17 [REDACTED], with the exception of Snapchat, which
 18 he did include in the relevant market. *Id.* ¶ 188-89. Dr. Farrell again explains why he excluded others
 19 like YouTube from the PSNS market. *Id.* ¶ 182; § II. Facebook’s arguments for exclusion boil down
 20 to disagreement over the conclusions Dr. Farrell draws based on his application of economic
 21 principles to the evidence. That is not a valid basis for exclusion.

22 Overall, Facebook’s Motion regarding Dr. Farrell’s qualitative analysis relies on the
 23 mischaracterization that Dr. Farrell simply “review[ed] and summariz[ed] documents” (Mot. 9) but
 24 even a brief look at Dr. Farrell’s report shows that is not what he did. *See* Ex. 1 §§ III-IV. Consistent
 25 with the law, in his qualitative analysis Dr. Farrell used his deep expertise in antitrust economics and
 26 relevant market definition to apply well-accepted economic principles to relevant evidence of the case
 27 to define a market. That is sufficient for his opinion to be admitted.

28

1 **B. Dr. Farrell Reliably Performed A Quantitative Hypothetical Monopolist Test**
 2 **Using Well-Accepted Economic Methodologies**

3 In its Motion, Facebook does not dispute that CLA and upward pricing pressure (UPP)—the
 4 quantitative methodologies Dr. Farrell used to assess whether the PSNS market passes the
 5 hypothetical monopolist test—are reliable and well-accepted in the field. *See Mot.* 9-12. They are.
 6 Instead, Facebook incorrectly asserts, based on lawyer argument and a mischaracterization of Dr.
 7 Farrell’s report, that Dr. Farrell did not use perfect data as inputs in those analyses, which supposedly
 8 renders his analysis unreliable. It does not. Moreover, Facebook’s criticisms of Dr. Farrell’s use of
 9 well-accepted and reliable methodologies at most goes to the weight, not admissibility, of his
 10 testimony. *See Kennedy v. Collagen Corp.*, 161 F.3d 1226, 1231 (9th Cir. 1998).

11 **1. CLA and UPP are well-accepted and reliable methodologies**

12 “A common quantitative metric used by parties and courts to determine relevant markets is
 13 the Hypothetical Monopolist Test (‘HMT’).” *FTC v. Meta*, 654 F. Supp. 3d at 912. CLA is an HMT
 14 “which essentially calculates the largest amount of sales that a monopolist can lose before a price
 15 increase becomes unprofitable.” *Fed. Trade Comm’n v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp.
 16 3d 27, 57 (D.D.C. 2018); *see Ex.* 10 (2023 Merger Guidelines) at 43 (CLA is a tool to carry out HMT
 17 which “assess[es] whether undertaking at least a SSNIPT on one or more products in a candidate
 18 market would raise or lower the hypothetical monopolist’s profits.”). “Critical loss analysis is a
 19 widely-used technique in antitrust practice.” *Ex.* 11, Daniel P. O’Brien & Abraham L. Wickelgren, *A*
Critical Analysis of Critical Loss Analysis, 71 Antitrust L.J. 161, 161 (2003). Numerous courts,
 20 including recently the Ninth Circuit, have found that CLA is a reliable HMT for determining a
 21 relevant antitrust market. *See Teradata Corp.*, 124 F.4th at 568-69 (holding rejection of critical loss
 22 analysis as a market-definition tool would be “unreasonable”); *Wilh. Wilhelmsen*, 341 F. Supp. 3d at
 23 57-58 (finding relevant product market was the one determined using expert’s CLA analysis); *FTC*
 24 v. *IQVIA*, 710 F. Supp. 3d at 370, 372 (same); *Dial Corp.*, 165 F. Supp. 3d at 40-42 (denying motion
 25 to exclude expert’s use of a CLA developed by Dr. Farrell to define relevant product market in
 26 consumer class action alleging Sections 1 and 2 violations of Sherman Act). Facebook’s economist
 27

1 expert, Dr. List, [REDACTED] . Ex. 4 (List
 2 Dep.) at 176:11-17, 169:4-9, 90:14-91:3.¹

3 UPP is a related approach to CLA that also uses diversion rates to implement the HMT. Ex. 1
 4 ¶¶ 95-98. UPP is well-established in the field and has been found reliable by courts. *See, e.g.*, Ex. 10
 5 (2023 Horizontal Merger Guidelines) at 37 (UPP is a quantitative metric used by DOJ and the FTC);
 6 *United States v. Bertelsmann SE & Co. KGaA*, 646 F. Supp. 3d 1, 44 (D.D.C. 2022) (“There is ample
 7 precedent for using GUPPI [gross upward pricing pressure index] and similar models to predict harm
 8 in antitrust cases.”); *United States v. Anthem, Inc.*, 236 F. Supp. 3d 171, 212 (D.D.C.), *aff’d*, 855 F.3d
 9 345 (D.C. Cir. 2017) (UPP analysis by plaintiff’s expert contributes to establishing anticompetitive
 10 effects); *Fed. Trade Comm’n v. Sanford Health, Sanford Bismarck*, 2017 WL 10810016, at *13, *16
 11 (D.N.D. Dec. 15, 2017), *aff’d sub nom. Fed. Trade Comm’n v. Sanford Health*, 926 F.3d 959 (8th Cir.
 12 2019) (relying on economist expert’s UPP analysis).

13 **2. Dr. Farrell’s CLA and UPP analyses properly use Facebook’s
 14 advertising revenue as an input**

15 Facebook’s assertion that Dr. Farrell’s CLA analysis is unreliable because it supposedly does
 16 not use “a price paid by users” as an input (Mot. 10-11), fails because it misconstrues his report. He
 17 does use a price as an input. He states that Facebook’s “[REDACTED]

18 [REDACTED]
 19 [REDACTED]
 20 [REDACTED]” and he uses that price. Ex. 1 ¶ 200. As he explains, there is not really a zero price to users
 21 for using Facebook—users supply value back to Facebook through their personal data, which
 22 Facebook monetizes. *Id.* ¶ 199.

23 Facebook’s claim that Facebook’s advertising profits cannot reliably be treated to “stand for
 24 a price paid by users” in a CLA is merely attorney argument, not grounds for exclusion. *See* Mot. 11.
 25 It does not cite any supporting academic literature. In fact, the pertinent economic literature by Nobel
 26 Prize winner Jean Tirole, which Dr. Farrell follows and cites to in his rebuttal report, [REDACTED]

27 [REDACTED] Ex. 2 ¶
 28 36. And Facebook does not explain how or why Dr. Farrell’s chosen price variable in his analysis

¹ Facebook conceded the expert model in *Teradata* “closely resembles Farrell’s approach” (Dkt. 777-1, at 10) before the Ninth Circuit reversed the district court decision excluding the model.

1 purportedly leads to a biased or incorrect result. *Id.* It does not, for the reasons he explains. Ex. 1 ¶¶
 2 198-214. Tellingly, Facebook's expert economist Dr. List and its co-founder and executives disagree
 3 with the Motion (*id.* at 10) that there is no price paid by the Facebook consumer, *see* Ex. 4 (List Dep)
 4 at 11:18-12:14 (██████████); Ex. 9 at -298 (Facebook co-founder explaining it "is not
 5 actually free," and "[w]e pay . . . with our data and our attention"); Ex. 7 at -069 (██████████
 6 ██████████). As Dr. List
 7 also admitted, "██████████."
 8 Ex. 3 (List Rep.) ¶ 258. Dr. List explained this close connection in his report and deposition: Facebook
 9 ██████████ (Ex. 4 (List Dep.) 9:22-25);
 10 Facebook ██████████ (*id.* 10:1-5, 10:24-11:2); and Facebook's
 11 increase in revenue is "██████████
 12 ██████████" (Ex. 3 (List Rep.) ¶ 258; Ex. 4 (List Dep.) at 11:3-14). In other words, Consumers pay a
 13 price to use Facebook in the form of their data. Facebook monetizes these data by selling ads, and the
 14 corresponding ad revenues are a measure of price for personal data from Facebook's perspective.

15 Facebook's argument also fails because it is contrary to Ninth Circuit precedent. In *Teradata*
 16 *Corp. v. SAP SE*, the Court endorsed a form of CLA, stating that "[o]ne way to implement the
 17 hypothetical monopolist test is to compare two values known as the critical loss threshold and the
 18 aggregate diversion ratio." 124 F.4th at 568. It then overturned the district court's holding that the
 19 expert's use of "non-price data" was unreliable. *Id.* at 569. The Court found that "[d]ata recording
 20 actual customer responses to price changes is frequently unavailable, so a categorical rule requiring
 21 such data would be unrealistic." *Id.* at 569.

22 Finally, disagreement over what input an expert should have used to calculate a CLA is not a
 23 valid basis to exclude expert testimony. *Dial Corp.*, 165 F. Supp. 3d at 40-42. In *Dial*, the defendant
 24 moved to exclude plaintiff's expert, asserting that, in doing his CLA, plaintiff's expert should have
 25 calculated the actual loss instead of estimating margin above marginal cost and reduction of demand
 26 in response to price increase captured by third parties. *Id.* at 41. The court denied the motion, finding
 27 the parties' disagreement over implementation of CLA goes to the "weight, not admissibility" of the
 28 expert's testimony. *Id.* at 42. The *Dial* court's holding is in accord with how the Northern District and

1 other districts rule on such motions. *Hamm v. Mercedes-Benz USA, LLC*, No. 5:16-CV-03370-EJD,
 2 2021 WL 1238304, at *14 (N.D. Cal. Apr. 2, 2021) (collecting cases); *accord In re Qualcomm*
 3 *Antitrust Litig.*, 328 F.R.D. 280, 305 (N.D. Cal. 2018) (vacated on unrelated basis); *see also In re*
 4 *TFT-LCD (Flat Panel) Antitrust Litig.*, 2013 WL 124347, at *1 (N.D. Cal. Jan. 8, 2013) (denying
 5 *Daubert* motion in antitrust case on this ground).

6 **3. Dr. Farrell’s CLA and UPP analyses use acceptable gross margins**

7 Dr. Farrell used [REDACTED] for the Facebook app produced by Facebook as
 8 an input in his CLA and UPP analyses. Essentially, Facebook asserts that Dr. Farrell’s profit margin
 9 data is too broad—that he should have instead used profit margin data associated only with
 10 Consumers’ use of the Facebook app as a PSNS, not for all uses of the Facebook app. Mot. 11-12.

11 Facebook’s only basis for its argument that the data Dr. Farrell used renders his analysis
 12 unreliable is its unfounded claim that he used profit margin data “he concede[d] are incorrect.” Mot
 13 11. He did not. Instead, he testified that [REDACTED]
 14 only, he would have used it, but he did not because it was not available. Ex. 5 190:11-12. In other
 15 words, as is often required in real-world quantitative analysis, Dr. Farrell used the next-best relevant
 16 and reliable data when his first choice was not available, and as he testified, broader profit margin
 17 data, “didn’t end up making a great deal of difference.” *Id.* 189:18-19.

18 Facebook’s assertion that Dr. Farrell’s broader data supposedly “fundamentally alters his data
 19 and renders it unreliable for defining a PSNS market” is Facebook’s say-so, unsupported by any
 20 literature in the field, caselaw, or analysis by its two economist experts. Mot. 11-12. Surely, if
 21 Facebook [REDACTED] in the form it claims Dr. Farrell should have used, and that data
 22 affected the conclusion of Dr. Farrell’s HMT analyses, either Dr. Carlton or Dr. List [REDACTED]

23 [REDACTED]
 24 [REDACTED]
 25 [REDACTED]
 26 [REDACTED], meaning
 27 the HMT test is still comfortably passed. Courts have found that CLA analysis is reliable for the
 28 factfinder in such instances. *Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. at 57–58; *Dial Corp.*, 165

1 F. Supp. 3d at 40-42. In *Wilhelmsen*, defendants challenged the profit margins the economist expert
 2 used in his CLA analysis for being “drawn from broader data sets that include all water treatment
 3 products.” *Id.* at *57. The court found that this did not mean the methodology was flawed, and noted
 4 that [REDACTED], defendant did not present any alternative calculations and anyway the gap between
 5 critical loss and aggregate diversion was so large that the overall result of the HMT was ensured to
 6 be correct “against any but the gravest statistical errors.” *Id.* at 57-58. Similarly, in *Dial*, defendant
 7 moved to exclude plaintiff’s expert, asserting that he should have estimated the margin variable in his
 8 CLA differently. *Id.* at 41-42. The court found this disagreement did not render the expert’s CLA
 9 methodology clearly unsound or unreasonable and denied the motion. *Id.* at 42.

10 Finally, more generally, “experts’ decision about what data to use in their analysis bear on the
 11 weight, not the admissibility of expert testimony.” *Hamm v. Mercedes-Benz USA, LLC*, No. 5:16-
 12 CV-03370-EJD, 2021 WL 1238304, at *14 (N.D. Cal. Apr. 2, 2021).

13 **IV. DR. FARRELL’S MARKET SHARE CALCULATIONS ARE RELIABLE**

14 Facebook has a commanding dominance of the PSNS market—a [REDACTED] share during the class
 15 period with Snapchat being a distant second with approximately [REDACTED]. Ex. 1 ¶¶ 254-55; *see also*
 16 *Optronic Techs., Inc. v. Ningbo Sunny Elec. Co.*, 20 F.4th 466, 484 (9th Cir. 2021) (“A market share
 17 of sixty-five percent or more usually establishes a prima facie case of monopoly power in Section 2
 18 contexts.”). Facebook seeks to exclude Dr. Farrell’s market-share calculations on the basis that they
 19 supposedly use “unsupported assumptions” (Mot. 12), but does not contend that any of these
 20 “assumptions” affect the outcome that Facebook has monopoly power. *See* Mot. 12-15. Many of Dr.
 21 Farrell’s “assumptions”—which are actually estimates of numbers based on factual evidence—
 22 *reduce* Facebook’s market share because Dr. Farrell uses them to limit [REDACTED]

23 [REDACTED] to use of Facebook and Instagram related to PSNS only, not all use of the apps. Ex. 1 ¶
 24 256. Dr. Farrell had to make these “assumptions” because Facebook [REDACTED]
 25 [REDACTED]. *See* Dkt. 933-1, Mot. to Exclude Carlton at 8 ([REDACTED])

26 [REDACTED]
 27 [REDACTED]
 28 [REDACTED]). Accordingly, Dr. Farrell used Facebook’s data for [REDACTED]

1 [REDACTED] and then reduced it to [REDACTED]
 2 [REDACTED]. Ex. 1 ¶¶ 256-57. At base, Facebook's
 3 motion argues that Dr. Farrell should have used different estimates, while acknowledging that the
 4 ones he did use are tethered to Facebook's own statements about [REDACTED]
 5 [REDACTED] The methodology Dr. Farrell used to calculate market share is simple math that Facebook
 6 does not dispute, and estimates he used in that calculation have a solid foundation in the record.
 7 Facebook's argument is at most a basis for cross-examination, not exclusion. *See Elosu*, 26 F.4th at
 8 1025 ("[W]hile a court may reject wholly speculative or unfounded testimony, it abuses its discretion
 9 if it overlooks relevant data submitted as the foundation of an expert's remarks."); *JH Kelly, LLC v.*
 10 *AECOM Tech. Servs., Inc.*, 605 F. Supp. 3d 1295, 1309 (N.D. Cal. 2022) (assertion expert "made an
 11 unsupported assumption and therefore reached faulty conclusions bears on the weight of his
 12 testimony, not its admissibility"); *In re Coll. Athlete NIL Litig.*, 2023 WL 8372788, at *12 (N.D. Cal.
 13 Nov. 3, 2023) (same). Facebook is asking the Court to do what the Ninth Circuit has stated is not
 14 proper on a *Daubert* motion: "Rule 702 does not license a court to engage in freeform factfinding, to
 15 select between competing versions of the evidence, or to determine the veracity of the expert's
 16 conclusions at the admissibility stage." *Elosu*, 26 F.4th at 1026.

17 Facebook first criticizes Dr. Farrell for [REDACTED]
 18 [REDACTED], based on Dr. Farrell's review of "[REDACTED]
 19 [REDACTED]
 20 [REDACTED]." Ex. 1 ¶¶ 256. Facebook provides no valid reason Dr. Farrell should not have relied on this
 21 information, which comes from "Widely Viewed Content Reports" prepared by Facebook in the
 22 ordinary course of business. Ex. 6 (Rule 30(b)(6) Dep. of Facebook) at 70:25-71:2. Facebook
 23 compiled information from these reports into a single document as "Background" for Consumers'
 24 30(b)(6) Deposition of Facebook. *See* Ex. 8 (Pl. Ex. 2968). The topic Facebook's representative
 25 testified on at that deposition was how [REDACTED]
 26 [REDACTED]
 27 [REDACTED] *Id.* at 9:18-10:19. The [REDACTED] number Dr. Farrell
 28 used is also consistent with Facebook statements elsewhere emphasizing that "[REDACTED]

1 [REDACTED]
 2 [REDACTED]
 3 [REDACTED] Ex. 2 (Farrell Reb. Rep.) ¶¶ 54-55 (emphasis
 4 added). Facebook's argument is not about the methodology Dr. Farrell used to calculate market share,
 5 which is basic arithmetic Dr. Farrell indisputably did correctly. It is a dispute over competing versions
 6 of the evidence, which is a matter for a jury. *Elosu*, 26 F.4th at 1026.

7 Facebook then criticizes Dr. Farrell for reducing all user [REDACTED]
 8 [REDACTED]
 9 [REDACTED]. See Mot. 14-15. Dr. Farrell used this estimate, as Facebook admits in its Motion,
 10 because Facebook [REDACTED]. Mot. 15. Facebook argues that Dr.
 11 Farrell should have used [REDACTED], even though this number too is just an estimate and does not
 12 accurately quantify Consumers' [REDACTED] on Instagram—instead it measures the
 13 number of “[REDACTED]” on Instagram. The appearance of an “[REDACTED]” in users’ Instagram Feed
 14 does not mean users [REDACTED] For example,
 15 users may [REDACTED]
 16 [REDACTED]. This is consistent with Facebook’s statement in this same
 17 document that “[REDACTED]”
 18 “[REDACTED]” Again, Facebook’s argument is not that Dr. Farrell’s methodology for computing market
 19 share is “junk science,” but a dispute over competing versions of the evidence, which is a matter for
 20 a jury to decide. *Elosu*, 26 F.4th at 1026. Moreover, whatever the jury determines, *it does not affect*
 21 ***Dr. Farrell’s market share outcome either way***. Even if he had used [REDACTED], the number
 22 Facebook propounds, or 0%, Facebook’s market share would still be over 65% (Ex. 1 ¶¶ 252-58, Fig.
 23 11)², establishing a prima facie case of monopoly power. See *Optronic Techs., Inc.*, 20 F.4th at 484.

24 **V. CONCLUSION**

25 For the reasons stated above, Facebook’s Motion should be denied in its entirety.

26

27

28 ² At 0%, Facebook’s share of minutes spent on apps in the relevant market is [REDACTED]
 [REDACTED].

1 DATED: May 12, 2025

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1 **ATTESTATION OF KEVIN Y. TERUYA**

2 This document is being filed through the Electronic Case Filing (ECF) system by attorney
3 Kevin Y. Teruya. By his signature, Mr. Teruya attests that he has obtained concurrence in the filing
4 of this document from each of the attorneys identified on the caption page and in the above signature
5 block.

6 Dated: May 12, 2025

7 By /s/ Kevin Y. Teruya
Kevin Y. Teruya

8 **CERTIFICATE OF SERVICE**

9 I hereby certify that on this 12th day of May 2025, I electronically transmitted the foregoing
10 document to the Clerk's Office using the CM/ECF System, causing it to be electronically served on
11 all attorneys of record.

12 By /s/ Kevin Y. Teruya
Kevin Y. Teruya